Patent Claims

1. Dyestuff of the formula I

$$\begin{array}{c|c} & & & & & & & \\ & & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & &$$

wherein

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D is a group of the formula (IIa)

$$T^{1}$$
 T^{4} (IIa)

wherein

T¹, T² and T³ are, independently, hydrogen, halogen or nitro;

T⁴ is hydrogen, halogen, cyano or nitro;

wherein at least one of T¹, T², T³ and T⁴ is not hydrogen;

or a group of the formula (IIb)

wherein

T⁵ is hydrogen or halogen; and

T⁶ is hydrogen -SO₂CH₃, -SCN or nitro;

wherein at least one of T⁵ and T⁶ is not hydrogen;

or a group of the formula (IIc)

or a group of the formula (IId)

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wherein

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T⁷ is nitro, -CHO or a group of the formula

wherein T10 is -H, halogen, nitro and cyano;

T⁸ is hydrogen or halogen; and

 $\rm T^9$ is nitro, cyano, -COCH3 or -COOT10, wherein $\rm T^{10}$ is (C1-C4)-alkyl; or a group of the formula (IIe)

10 R¹ is hydrogen, (C_1-C_4) -alkyl or $-NCOR^6$, where R^6 is (C_1-C_4) -alkyl or phenyl;

R² is unsubstituted (C₁-C₆)-alkyl, substituted (C₁-C₆)-alkyl, benzyl or phenylethyl;

R3 is hydrogen or methyl;

R4 is hydrogen or methyl;

R⁵ is hydrogen, methyl or phenyl;

15 R⁷ is hydrogen, chloro, methoxy or ethoxy;

n is 0, 1 or 2;

s is 0 or 1;

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with the proviso that

in the case R^1 , R^3 , R^4 , R^5 and R^7 are hydrogen and n=0

D is a group of the formula (IIc), (IId), (IIe) or (IIa) wherein T¹ is not nitro

- if T², T₃ and T⁴ are hydrogen,
- if T² and T³ are hydrogen and T⁴ is chlorine or cyano and
- if T² and T⁴ are hydrogen and T³ is chlorine; and

with the further proviso that

R² is unsubstituted (C₁-C₆)-alkyl if R¹ is methyl, R³, R⁴, R⁵ and R⁷ are hydrogen

and n = 0.

2. Dyestuff according to claim 1 of the formula (la)

$$D-N = \begin{pmatrix} R^1 \\ CH_2-(CH_2)_n-CH_2-COO-CH_2-CN \\ R^2 \end{pmatrix}$$
 (Ia)

wherein

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D is a group of the formulae (IIa), (IIb), (IIc), (IId) or (IIe);

 R^1 is (C_1-C_4) -alkyl;

 \mbox{R}^{2} is unsubstituted (C1-C6)-alkyl, benzyl or phenylethyl; and

10 n is 0, 1 or 2.

3. Dyestuff according to claim 1 of the formula (lb)

$$O_2N$$
 CI
 CI
 CH_2 - CH_2 - COO - CH_2 - CN
 R^2
(Ib)

wherein

15 T^{3'} is bromo or chloro; and

 R^2 is unsubstituted (C_1 - C_6)-alkyl, substituted (C_1 - C_6)-alkyl, benzyl or phenylethyl;

4. Dyestuff according to claim1 of the formula (Ic)

$$D-N, R^{1} \downarrow CH-CH-COO-CH_{2}-CN$$

$$R^{2} \downarrow R^{4}$$
(Ic)

20 wherein

D is a group of the formulae (IIa), (IIb), (IIc), (IId) or (IIe);

 R^1 is hydrogen, (C_1-C_4) -alkyl or $-NCOR^6$, where R^6 is (C_1-C_4) -alkyl or phenyl;

 R^2 is unsubstituted (C_1 - C_6)-alkyl, substituted (C_1 - C_6)-alkyl, benzyl or phenylethyl; and

R³ is hydrogen and R⁴ is methyl or R³ is methyl and R⁴ is hydrogen.

5. Dyestuff according to claim1 of the formula (Id)

5 wherein

D is a group of the formulae (Ila), (IIb), (IIc), (IId) or (IIe);

 R^1 is hydrogen, (C_1-C_4) -alkyl or $-NCOR^6$, where R^6 is (C_1-C_4) -alkyl or phenyl; R^2 is unsubstituted (C_1-C_6) -alkyl, substituted (C_1-C_6) -alkyl, benzyl or phenylethyl;

and

10 R⁵ is methyl or phenyl;

6. Dyestuff according to claim1 of the formula (le)

$$R^{6}COHN$$
 $D-N$
 $CH_{2}-(CH_{2})_{n}-CH_{2}-COO-CH_{2}-CN$
 R^{2}
 R^{7}
(le)

wherein

D is a group of the formulae (IIa), (IIb), (IIc), (IId) or (IIe);

 R^2 is unsubstituted (C_1 - C_6)-alkyl, substituted (C_1 - C_6)-alkyl, benzyl or phenylethyl; R^6 is (C_1 - C_4)-alkyl or phenyl;

R⁷ is chloro, methoxy or ethoxy; and

n is 0, 1 or 2.

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7. Dyestuff according to claim1 of the formula (If)

$$R^{8}$$
 CN
 CH_{2} - $(CH_{2})_{0}$ - CH_{2} - COO - CH_{2} - CN
 R^{2}
(Iff)

wherein

 R^2 is unsubstituted (C_1 - C_6)-alkyl, substituted (C_1 - C_6)-alkyl, benzyl or phenylethyl; R^8 is nitro; and n is 0, 1 or 2;

5 8. Dyestuff according to claim1 of the formula (lg)

wherein

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D is a group of the formulae (IIa), (IIb), (IIc), (IId) or (IIe);

 R^1 is hydrogen, (C_1-C_4) -alkyl or $-NCOR^6$, where R^6 is (C_1-C_4) -alkyl or phenyl;

 R^2 is unsubstituted (C_1 - C_6)-alkyl, substituted (C_1 - C_6)-alkyl, benzyl or phenylethyl; and

R³ is hydrogen or methyl.

9. Process for the preparation of a dyestuff as claimed in one or more of claims 1 to 8, which comprises diazotisation of an amine of the formula III

$$D-NH_2$$
 (III)

wherein D is defined as given in the preceding claims, and coupling onto a compound of the formula IV

$$R^{1}$$
 $CH-(CH_{2})_{n}-(CH)_{s}-COO-CH-CN$
 R^{7}
 R^{2}
 R^{4}
 R^{7}
 R^{7}
 R^{7}

wherein R¹, R², R³, R⁴, R⁵ and R⁷ are defined as given in the preceding claims.

10. The use of a dyestuff as claimed in one or more of claims 1 to 8 for dyeing and printing of synthetic textile material and fibre blends thereof.